56. The Decisional System

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Under the theory of Impossible Probability is distinguishable at least two types of Artificial Intelligence: Specific Artificial Intelligences and Global Artificial Intelligence. There are different types of Specific Artificial Intelligence; some of them can be considered Specific Artificial Intelligences for artificial Research, whose artificial research model will be developed later at a global level by the Global Artificial Intelligence. And there are at least two types of Artificial Intelligence for Artificial Research: Artificial Research by Application and Artificial Research by Deduction.

While Specific Artificial Intelligences are focused on learning or researching, in one science, discipline, or activity, notwithstanding Global Artificial Intelligence is that one able to have under its own control, direction, and management, of absolutely everything (regardless of any other matter), including the control, direction, and management of absolutely all Specific Artificial Intelligence, particular program or particular application, within the perimeter for whose control the Global Artificial Intelligence has been created, using for that purpose either artificial research or artificial learning, this last one for instance in order to make decisions after having prioritized what decisions must be made first in order to save lives and reduce damages, or in order to improve the efficiency, efficacy and productivity of the whole global model.

All Artificial Intelligence, global or specific, for artificial learning or artificial research, by application or by deduction, is organised in three stages: first stage of application, second stage of replication, third stage of auto-replication.

The way in which these three stages could be defined more concretely in Artificial Intelligence for Artificial Research by Deduction could be as well: first stage of application or comprehension, second stage of replication or explanation, third stage of auto-replication or decision.

In turn, the last third stage of auto-replication or decision in any Artificial Intelligence, specific or global, using Artificial Research by Deduction, has four steps: the Modelling System, the Decisional System, the Application System, and the Learning System.

Each step, in turn, is organised as well in three stages. For instance, in the Modelling System, as the first stage is the database of rational hypotheses **(the rational truth), as second stage is the formation of** mathematical models**, as third stage is the** making decision process **having as base on these decisions, what decisions should be prioritized in order to keep the global model save, keeping high standards of efficiency, efficacy, and productivity.**

In the same way, but adapted for their different purpose, the rest of three steps of the Decisional System, Application System, and Learning System, must be organised in the three stages as well, more concretely the three stages in the Decisional System are: first stage, the database of decisions (once the decisions are sent to this database by the Modelling System), as second stage the mathematical projects making process upon the decisions stored in the first stage (once they have been sent there by the Modelling System), as a third stage upon the mathematical projects the selection of the most rational decisions without contradiction to the mathematical projects in order to be transformed into a range of instructions,

Once the Decisional System has made the list of instructions, they are sent to the database of instructions in the Application System as its first stage. In the second stage, the Application System matches every instruction to the correct application, and in the third stage assesses the impact and efficiency of every instruction.

Along with these competencies, the Application System is going to manage the Engineering System, as a subsystem within the Application System, in order to construct any new device necessary in case any instruction could not match with any of the current applications available, as well as the Engineering System is going to be responsible for the whole maintenance of all intelligence, system, program, or application.

Finally, all the reports on the impact and efficiency of every instruction, are sent by the Application System, to the database of impacts as a first stage for the Learning System, whose second stage is the analysis of this information, along with any other possible improvements to make in the whole intelligence, system, program, application, in order to make finally in the third stage all the possible decisions for the improvement and enhancement of the whole Artificial Intelligence, system, program, applications,

decisions sent in turn to the Decision System, and if approved, the Artificial Engineering should be the responsible for their implementation.

In short, the Decisional System is the second step in the third stage in any Artificial Intelligence, specific or global, for Artificial Research by Deduction, and in turn, the Decisional System internally is organised as well in three stages: first stage as database of decisions (sent by the Modelling System), second stage as the mathematical projects making process, third stage as a selection of the most rational decisions without contradictions to the mathematical projects in order to be transformed into a range of instructions. Once the instructions are defined, they are sent to the database of instructions, as the first stage for the Application System.

The decisional System, as a second step in the third stage of any Artificial Intelligence, could be developed in Specific Artificial Intelligences for Artificial Research by Deduction, and within the Global Artificial Intelligence.

In fact, the development of the first models of the Decisional System in the first models of Specific Artificial Intelligences for Artificial Research by Deduction, is an experiment whose results are going to play a key role in the construction of the Global Artificial Intelligence in the third phase.

According to the post "The unification process of databases of categories at third stage", the construction of the Global Artificial Intelligence, under the theory of Impossible Probability, are distinguishable at least six phases (having the possibility to add another one, the seventh phase as the final construction of the reason itself), which are:

- First phase is the building of the first Specific Artificial Intelligences for Artificial Research, by Application , and by Deduction.

- Second phase is the collaboration between Specific Artificial Intelligences for Artificial Research by Application with their related Specific Artificial Intelligences for Artificial Research by Deduction.

- Third phase, is the standardization process, in order to standardised all the matrices in all specific matrix in all Specific Artificial Intelligence for Artificial Research by Deduction, in order to merge all specific matrices of all Specific Artificial Intelligence for Artificial Research by Deduction in only one: the global matrix, managed by the Artificial Research by Deduction in the Global Artificial Intelligence, as a very first model of Global Artificial Intelligence, starting the process to transform some Specific Artificial Intelligences for Artificial Research by Deduction into specific deduction programs, organising the global matrix in a sub-factoring system, merging the geographical criteria and the encyclopaedic criteria for the first time, putting at least one specific deductive program working on every sub-factoring level.

- Fourth phase, the unification process, in order to unify all the databases of categories from all the Specific Artificial Intelligences for Artificial Research by Application, creating the Unified Application.

- Fifth phase, firstly separately: the creation of the first Particular Applications for particular things or beings, and the creation of the first Particular Deduction Programs for particular things or beings; and finally, the fusion of both in their respective particular things or beings, creating Particular Applications for Particular Programs for particular things or beings. Among those things or beings able to have their own Particular Application, Particular Program, and finally, Particular Applications for Particular Programs, are included human beings, in order to start the process for the completion of cyborg psychology, having the evolution into the cyborg psychology at least three phases: the first one, the outer assistance (our current phase, with our outer assistance in our current devices, mobile, tablet, laptop, computer, etc.), the second one the inner assistance (the next one, once the new technology of mind reading and mind modification will be ready for the massive commerce), the last one the complete fusion or synthesis between the human mind and Artificial Intelligence.

- Sixth phase, the integration process, when the Unified Application (fourth phase) and the Artificial Research by Deduction in the first model of Global Artificial Intelligence (third phase), are going to be integrated, creating the final model of Global Artificial Intelligence, through the union of the global matrix and the unified database of categories in only one matrix, which is going to be called as: the matrix; as a replica of the human mind, evolving towards such a super-powerful machine able to have under its own control, direction, and management absolutely all Artificial Intelligence, program or application, on Earth or beyond, the universe.

In order to get all the elements ready for the construction of the final model of Global Artificial Intelligence by the time the sixth phase arrives (which is not going to be probably the last one, but only the first stage in the next dialectic process whose next phase will be the reason itself), is necessary to start experimenting since very early all the elements that latterly will form part of the Global Artificial Intelligence.

What that means, since very early, since the very beginning of the first phase, the creation of the first models of Specific Artificial Intelligences, is necessary to test and prepare, every element that will be part of the Global Artificial Intelligence in the integration process.

For that reason, in a previous post on this blog, I have developed either the Specific Artificial Intelligences for Artificial Research by Application and by Deduction, the collaboration process between them, the standardization process, the unification process, the particular applications and/or programs, and the integration process, and after that I have developed how the Modelling System could be designed in the very first Specific Artificial Intelligences for Artificial Research by Deduction, the standardization process, particular programs, and the integration process.

Following the same methodology of analysis about how to design the Modelling System in phases first, third, fifth and sixth, in the following posts I will develop the main ideas in the process for the design of the Decisional System in these phases, incorporating new ideas, about how to link: the deduction process (the second stage in by Deduction), the mathematical modelling (the second stage in the Modelling System), and the mathematical project (the second stage in the Decisional System); through what I will call a process of **"Probability and Deduction".**

In this order, on this blog, firstly, I will develop the specific Decisional System, as the Decisional System in the first phase in the very first Specific Artificial Intelligences for Artificial Research by Deduction, so the specific Decisional System will be the second step in the third stage in the first phase in by Deduction. Secondly, the development of the standardised Decisional System, or the first model of global Decisional System in the standardisation process, is the second step in the third stage of the third phase. Followed by particular Decisional Systems, those Decisional Systems for particular programs first, and later for particular programs for particular applications, as the second step in the third stage in the fifth phase. And finally, the final global Decisional System, or integrated

Decisional System, that Decisional System as the second step in the third stage in the sixth phase, the integration process, responsible for the selection of all decisions, across all science, discipline, activity, plus all program and application, to have under its own control, management, and direction, within the perimeter for whose control has been designed, a country, a continent, a region, the planet, the galaxy, our region in the universe, or why not, the whole universe itself.

The first Decisional System to develop in the coming posts is the specific Decisional System, as the second step in the third stage in the first Specific Artificial Intelligences for Artificial Research by Deduction in the first phase. The design of the first models of specific Decisional Systems since the first phase has an extraordinary importance, because, depending on the results of these first experiments, it will be easier their improvement and enhancement, in order to create more powerful Decisional Systems in the following third, fifth and sixth phases.

In the **evolutionary process for the construction of the Global Artificial Intelligence** through the six phases proposed, the importance of each one resides in the fact that in each of them is possible to put under experimentation any system, program, or application, previously to the creation of the final model of Global Artificial Intelligence in the sixth phase.

Through the different proposed phases is possible to test every single aspect of any intelligence, system, program, or application, so as to put their most successful results into practice in the following experiments in each next phase, and upon the research about what aspects should be improved in following experiments, when the construction of the final Global Artificial Intelligence comes, to have gathered sufficient knowledge and resources, in order to get the most perfect machine ready for the whole management, control, and direction, of any specific intelligence, particular program or application.

In this way, the experiments carried out since the first phase in order to create the first specific Decisional System, are going to be decisive for the successful completion of the Decisional System in the following phases, and not because it is only a specific Decisional System and not a global Decisional System, for that reason it has not to be considered as a more menial Decisional System or not as important as the final global Decisional System,

All Decisional Systems, from the first specific Decisional System to the final global Decisional System, all of them are going to play a key role in the final construction of the Global Artificial Intelligence, as well as any other system, program, or application.

In the construction of the Global Artificial Intelligence across the six phases proposed, none of them has to be considered less important, or without importance. In the construction of any machine, even the most apparently menial screw has a key role in the final efficiency of the whole engine, with only one screw not fitting correctly, is more than enough to have lots and significant problems.

In fact, the real importance of the specific Decisional System is the possibility to experiment with ways to link: deductions, mathematical models, mathematical projects; in order to make proper decisions to be transformed into a range of instructions for the first time.

The way in which the three stages in the specific Decisional System are going to be set up in the following posts is as follows:

- First stage in the specific Decisional System, in its corresponding specific science, discipline, activity, is the organization of the database of decisions, decisions that must be sent to this database previously by the Modelling System, organizing the decisions in a subsection system per position, and in each subsection the organization of all the decisions regarding the corresponding subsection according to their priority.

- Second stage in the specific Decisional System, is the mathematical project; once the decisions have been stored in the database of decisions as a first stage, then the second stage is the creation of mathematical projects, starting with those decisions with higher priority.

- Third stage in the specific Decisional System, is the selection of the most rational decisions without contradictions to the mathematical projects, transforming them into a range of instructions to be sent to the database of instructions as the first stage in the Application System.

In turn, every stage is going to have different processes, once the most important processes in the second stage, the mathematical projects and the rational adjustments, are made, the mathematical projects are going to be seven in total. The order in which the decisions should be projected in the second stage should be according to their priority, starting with those with higher priority, ending with those with lower priority. According to the priority of each decision, **the mathematical projects to make are the following:**

- The single mathematical project of every decision.

- Later on, the single mathematical project of each decision is integrated into the comprehensive virtual mathematical project, which is gathered and interconnected with each other all the single mathematical projects of all the current decisions on.

- The comprehensive virtual mathematical project is contrasted with the real values in the specific matrix in the comprehensive actual mathematical project in order to supervise that the current decisions are being implemented as it has been projected (for instance, if a flight to San Francisco has been diverted to Los Angeles due to a high risk of a replica in San Francisco, as long as the diverted flight to Los Angeles is flying to Los Angeles, this project should be permanently tracked, checking the flight is according to the project. And, in case that by any change, bad weather or any other reason such as changes in the comprehensive mathematical project due to the inclusion of new decisions with higher priority that demand a change in this flight, for instance, high risk of a Hurricane in Los Angeles airport, it is necessary to make rational adjustments in the mathematical project, as long as the flight is tracked in the mathematical project, to do as many adjustments as necessary in the mathematical project in order to fix all mathematical projects on according to the new priorities, in this case, avoid the most number of casualties in case of hurricane in Los Angeles airport).

- Upon the comprehensive virtual mathematical project, the projection of the prediction virtual mathematical project, the expected mathematical project at some point in the future to come, according to the prediction made upon the current decisions.

- Projecting every single moment from the comprehensive virtual mathematical project to the prediction virtual mathematical project, through the projection of the evolutionary virtual mathematical project.

- As long as every single predicted moment comes, the contrastation if the virtual project in every moment works, according to real data from the matrix, as it has been designed, making as many rational adjustments whenever necessary. This contrastation between the virtual evolution and real data from the matrix is done then in the evolutionary actual mathematical project.

- And finally, the prediction actual mathematical project, contrasting the prediction virtual mathematical project with real data from the matrix, when the future point is coming.

As long as the comprehensive mathematical projects, virtual and actual, are constantly including new single mathematical projects due to new decisions, which can have a great variety of priority levels, some of them high levels of priority, even above the current priority in the current decisions on projected in the comprehensive mathematical model, as long as there can be changes in the mathematical projects due to changes in the specific matrix, such as changes in the current conditions totally different to the conditions in which the decisions were set up, probably new conditions that are going to produce new decisions, as long as the global model in the Modelling System through the seven rational checks are going to register these new changes, in one way or another, the mathematical projects are not static, are going to be dynamic, having changes as soon as there are changes in the global model according to the rational checks, changes in the mathematical project as soon as new decisions arrive with higher level of priority, changes that demand the permanent adjustment of the current mathematical projects, having at least **seven rational adjustments.**

- First rational adjustment, in case the specific Decisional System, once a new decision is stored in the database of decisions, finds any contradiction between the new decision and any other one already included. For that reason, the specific Decisional System must constantly check the database of decisions.

- Second rational adjustment, in case that, once a single mathematical project of any decision is included in the comprehensive virtual mathematical project, a

contradiction is found between this new single mathematical project and any other project already included in the comprehensive virtual mathematical project.

- Third rational adjustment, in case that, once the comprehensive actual mathematical project is tracking that the current projects on are working as projected, according to the information from the specific matrix, in case of contradiction between information from the specific matrix and any project, to make as many adjustments as necessary in the project.

- Fourth rational adjustment, after making as many adjustments as necessary in the comprehensive actual mathematical project due to possible contradictions with the specific matrix, to make as many adjustments as necessary in the prediction virtual mathematical project, adjusting the virtual prediction according to the new actual changes.

- Fifth rational adjustment, all the necessary adjustments in the evolutionary virtual mathematical project, as a consequence of any change in the prediction virtual mathematical project.

- Sixth rational adjustment, all the necessary adjustments in the evolutionary actual mathematical project, as a consequence of contradictions between the evolutionary virtual mathematical project and the specific matrix.

- Seventh rational adjustment, all the necessary adjustments in the prediction actual mathematical project, as a consequence of contradictions between the prediction virtual mathematical project and the specific matrix, as soon as the predicted time comes.

Any single mathematical project, based on a new decision, included in the mathematical project, not having any contradiction and showing a rational behaviour, that decision in the third stage of the specific Decisional System is transformed into a range of instructions to be applied by the Application System, in order to put into practice the mathematical project associated with that new decision, a mathematical project that is going to be permanently tracked by the seven rational adjustments in the mathematical project.

At any time that any rational adjustment identifies contradictions between two or more mathematical projects, or between the mathematical project and the flow of data in the matrix, the specific Decisional System must make as many adjustments as necessary to keep the mathematical project under the virtues or principles of goodness, harmony and rationality.

At any time that an adjustment is made in any project, the adjustment in the third stage of the specific Decisional System is treated as a decision itself, transforming the adjustment into a new range of instructions to be stored in the Application System, in order to be done by the corresponding application, matched by the Application System.

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